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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,057	10/12/2004	Hubert Baumgart	PAT-00293	2264
26922	7590	08/02/2006	EXAMINER	
BASF CORPORATION 1609 BIDDLE AVENUE WYANDOTTE, MI 48192			CHEUNG, WILLIAM K	
			ART UNIT	PAPER NUMBER
			1713	
DATE MAILED: 08/02/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/511,057

Applicant(s)

BAUMGART ET AL.

Examiner

William K. Cheung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-19 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Claims 1-19 are pending.
2. In view of amendment filed July 18, 2006, the rejection of claim 17 due to an improper use of MARKUSH GROUPS is recited in claim 17 (line 2), is withdrawn.

### ***Claim Rejections - 35 USC § 112***

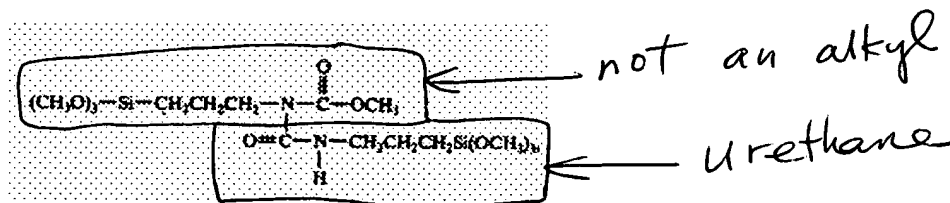
3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 1-19 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for using the claimed oligomers and polymers containing at least one allophanate group or at least one carbamate group, does not reasonably provide enablement for preparing the claimed oligomers or polymers containing at least one allophanate group and at least one carbamate group. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

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Applicant's arguments filed July 18, 2006 have been fully considered but they are not persuasive. Applicants argue that applicants' specification (paragraph 50) discloses a method of copolymerizing a monomer mixture and reacting the resultant hydroxyl-containing MMA copolymer with at least one alkylurethane, and that one of ordinary skill in art would have recognized that an "alkylurethane group" could be either a carbamate group or an allophanate group. However, the examiner disagrees because applicants' specification (paragraph 50) fail to disclosed the argued "alkylurethane". Further, applicants fail to recognize that an allophanate is not an alkylurethane.



Allophanate

5. Claim 1-19 are rejected under 35 U.S.C. 1 12, first paragraph, because the specification, while being enabling for preparing a urea or a urea derivative prepared by reacting amine with at least one polyisocyanate, does not reasonably provide enablement for preparing a urea or a urea derivative prepared by reacting water with at least one polyisocyanate. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

Applicant's arguments filed July 18, 2006 have been fully considered but they are not persuasive. Applicants argue that applicants' specification (paragraph 53-54) teach reacting at least one amine and/or water with at least one polyisocyanate in the presence of at least one oligomer/or polymer, and one of ordinary skill in art would have recognized that water can react with polyisocyanate to form an unstable carbamic acid. The carbamic acid then decomposes to generate carbon dioxide and amine. The amine then reacts with additional isocyanate to yield urea. However, the examiner disagrees because it would not be obvious to one of ordinary skill in art to speculate reaction products of an undisclosed multi-step reaction sequence.

Regarding applicants' argument that the examiner fail to provide a reason why the claimed "urea or a urea derivative prepared by reacting water with at least one polyisocyanate" is not enabled, applicants must recognize that the examiner is contented that reaction of polyisocyanate with an amine can form a urea or an urea derivative. However, the reaction of polyisocyanate with water does not necessarily form a urea or an urea derivative because the reaction of isocyanate groups with water is normally spontaneously fast and completely deplete the isocyanate groups. Therefore, the examiner has a reasonable basis that the claimed "urea or a urea derivative prepared by reacting water with at least one polyisocyanate" is not enabled

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 (line 6-8), the recitation "a urea or a urea derivative prepared by reacting with at least one amine and/or water with at least one polyisocyanate" is considered indefinite. However can a urea or a urea derivative be prepared by reacting water with at least one polyisocyanate?

Applicant's arguments filed July 18, 2006 have been fully considered but they are not persuasive. Applicants argue that applicants' specification (paragraph 53-54) teach reacting at least one amine and/or water with at least one polyisocyanate in the presence of at least one oligomer/or polymer, and one of ordinary skill in art would have recognized that water can react with polyisocyanate to form an unstable carbamic acid. The carbamic acid then decomposes to generate carbon dioxide and amine. The amine then reacts with additional isocyanate to yield urea. However, the examiner disagrees because it would not be obvious to one of ordinary skill in art to speculate reaction products of an undisclosed multi-step reaction sequence.

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Claim 10 (line 2) the recitation "modified" is considered indefinite because it is not defined in the specification. What do you mean by that?

Applicant's arguments filed July 18, 2006 have been fully considered but they are not persuasive. Applicants argue that one skill in art would have recognized that once formed, pyrogenic silica can be modified through chemical reactions. For example, the pyrogenic silica can be modified through reactions with different organic compounds. This modification can change the physical and/or chemical properties at the surface of the silica. Therefore, applicants believe that one skill in art would recognize the meaning of modified pyrogenic silica. However, the examiner disagrees because the language of a claim must be defined in the claims or specification in order set the mete and bound of the claims. Since applicants' specification fail to define what a modified pyrogenic silica is, the 112 rejection for claim 10 is proper.

Claim 12 (line 3), claim 13 (line 3), claim 14 (line 1), the recitations "complementary" are considered indefinite because the recited term is not defined in the specification. What does "complementary" mean in reference to allophanate groups and carbamate groups?

Applicant's arguments filed July 18, 2006 have been fully considered but they are not persuasive. Applicants argue that one of ordinary skill in art would recognize that "at least one crosslinking agent containing on average per molecule at least two reactive

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functional groups which are complementary to allophanate groups” of claim 12 refers to functional groups that will react with allophanate to form crosslinking bonds between molecules. However, the examiner disagrees because applicants’ specification fails to disclose such definition.

Applicants argue that one of ordinary skill in art would recognize that “at least one reactive functional group which is complementary to carbamate and allophanate groups” of claims 13 and 14 refers to functional groups that can react with carbamate and allophanate groups to join separate oligomers and/or polymers. However, the examiner disagrees because applicants’ specification fails to disclose such definition.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any



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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K. Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William K. Cheung, Ph. D.

Primary Examiner

July 28, 2006

**WILLIAM K. CHEUNG**  
**PRIMARY EXAMINER**